Hamilton, COSMO. *A Plea for the Younger Generation.* London. Chatto and Windus; 1913; price 2s. 6d. net; pp. 63.

A RHETORICAL plea for direct teaching of sex knowledge with a religious basis and without the use of biological analogies. It is embellished with some well-told though slightly irrelevant anecdotes, and marred by the ignorant misrepresentation of eugenics and by a curious display of rancour against science and scientists.

EDGAR SCHUSTER.

Pearson, KARL, F.R.S., **Nettleship,** E., F.R.C.S., F.R.S., and **Usher,** C. H., M.B., B.C. *A Monograph on Albinism in Man.* (Drapers' Company Research Memoirs: Biometric Series, No. IX.). London. Dulau and Co.; 1913. Part II., price 30s. net; Text pp. xii. + 265-524, and Atlas Plates α-ω, and $\alpha\alpha$-$\eta\eta\lambda$. Part IV., price 21s. net; Text pp. 136 + xxiii., Atlas Plates I.-LIX.

THOSE who had the opportunity of reading the first instalment of this monograph will welcome the appearance of the second and fourth parts which have now been issued. In the first chapter of Part II. (the seventh of the whole monograph) the albinotic eye in man is described. The authors define perfect or complete albinism of the eye "as existing in those cases where the eye structures are entirely devoid of pigment." It can only be determined by an exhaustive microscopical examination, and there appears to be no certainty that it is ever met with in human beings as "only a very few albinotic eyes have hitherto been examined microscopically, and in all of these either the albinism or the examination was incomplete." The few microscopical investigations which have been made are carefully described, and then the characters of the living albinotic eye are discussed. Some of the most interesting points referred to are the increase of pigmentation which appears to occur with age, and the nature and incidence of visual defects. Nystagmus or the rhythmical oscillation of the eyeballs is almost always present in albinos, and of the refractive errors a high degree of hypermetropia and astigmatism are far commoner than among normal persons. The poor sight which generally characterises the albino appears, however, to be due principally, not to these defects, but to the absence or deficiency of retinal pigment.

Albinotic hair in man and the lower animals forms the subject of Chapter VIII. Much research has been necesary to collect the material on which this section of the work is based, and so complex are the results obtained that it is difficult to reduce them to any tolerably simple formula. The colouring matter of the hair occurs in two forms, either diffused through the fibrillæ of the hair like a dye, or as distinct granules of pigment lying between them. The authors consider the absence of this granular pigment as the distinctive mark of complete albinism of the hair. This view leads, however, to some apparent anomalies of classification, because many yellow and reddish hairs are without granular pigment and must thus be considered completely albinotic, while hair which is absolutely snow-white may contain a few pigment granules and be thus excluded from this class. The general conclusion to be drawn is that albinism, both of the hair and of the eyes, occurs in varying degrees, and a simple binary classification of human beings into albinos and normally pigmented persons cannot properly be made. The further conclusion may be drawn that for the purpose of making a complete study of the inheritance of pigmentation naked eye obervations on the living subject are hardly sufficient.

The investigations of the albinotic eye in animals, which are described in Chapter IX., were made necessary by the dearth of observations in human beings; they show that almost any grade of albinism of the eye may occur. The seasonal variation of winter white animals, which is discussed in Chapter X., is also a relevant subject of study as tending

to throw light on the general question of albinism. The seasonal changes observed in the coat colour of the Norwegian variable hares kept in Aberdeen are described week by week throughout the year, and illustrated by a long series of photographs. It is interesting to note that some small seasonal change in the pigmentation of the eye appears to occur, though the statistics collected on this point are not sufficiently extensive to establish it with certainty.

The experimental breeding of albino dogs forms the subject matter of Chapter X. The pekinese spaniels which were largely used in these experiments are particularly suitable for the purpose because the type of albinism which they exhibit appears to resemble more closely that found among human beings than does the albinism of other animals. The pedigree of these dogs is shown on plate LVII. of the atlas to Part IV. It is a remarkable specimen of drafting as thirteen generations are shown, among which, as is usual in pedigree stock, polygamy and inbreeding were customary. The result is something very like a maze, and would take hours of patient study to interpret.

The atlas of Part IV also contains the collection of 654 pedigrees of human albinism which has been formed by the authors. The text of this part provides careful descriptions of them, but their statistical reduction and analysis has been reserved for Part III., which has not yet been issued. Part IV. also contains a valuable bibliography. The printing and general get up of these volumes are of the highest quality.

EDGAR SCHUSTER.

Herbert, S., M.D. *The First Principles of Evolution.* A. and C. Black; 7s. 6d. net; pp. 346.

THIS book is not a critical study of the theory of evolution, such as the title rather suggests, but a summary of the facts and hypotheses on which the idea of evolution, in the widest sense, rests. It deals with all sides of the subject—evolution of stars and planetary systems, of the atom as indicated by modern work on radio-activity, the geological record, organic evolution in general, and finally that of man and his societies. It is obvious that in the space available, much of which is taken up by reproductions of good but well-known illustrations, these subjects must be discussed very shortly, but the author knows how to choose the salient points, and to give his readers a clear idea of the principles involved. When the small size of the book is considered, it is really rather a remarkable achievement, for it is readable throughout, and should give those who have little scientific training some idea of the unity of science and of its purpose, the search for satisfying knowledge of the nature and origin of the world in which we live. One of the most interesting chapters is that on mental evolution, or, perhaps, we should say, the evolution of behaviour, starting from the work of Jennings and others on the Protozoa and tracing the increasing complexity through the higher forms of life. The chapters on man are greatly condensed, but there is a long bibliography, which will enable the reader to follow up the questions which are raised if he wishes to pursue any particular part of the subject further. It is a book to be recommended to a non-scientific reader who wishes to get a general idea of the subject.

L. DONCASTER.

Ward, PROFESSOR JAMES, SC.D. *Heredity and Memory,* being the Henry Sidgwick Memorial Lecture, 1912. Cambridge University Press; 1913; 1s. 6d. net; pp. 56.

IN this lecture Professor Ward gives a concise and clear account of the hypothesis that heredity is a form of memory. In his view, it is no mere metaphor to speak of heredity as racial memory, but a statement of literal fact. The principle of continuity demands that if the psychical be admitted in man, it must exist in lower forms, and we know that